

Table B-2
Risk-Based Ecological PRGs
 Portland Harbor Superfund Site
 Portland, Oregon

COCs	Target Risk Level	Units	Tissue Residual Assessment											Invertivore				
			Benthic					Invertavore		Omnivore	Piscivore		Detrivore	Invertivore				
			Clams	Crayfish	Worms	LRM	PEC	Sculpin	Peamouth	Largescale Sucker	Northern Pikeminnow	Smallmouth Bass	Pacific Lamprey	Sculpin	Peamouth	Juvenile Chinook	Largescale Sucker	
														clams worms sculpin	clams worms sculpin	clams worms multiplates	clams worms	
Arsenic	HQ=1	mg/kg					33											
Cadmium	HQ=1	mg/kg		NA			4.98	NA						NA		NA		
Chromium	HQ=1	mg/kg		NA			111											
Copper	HQ=1	mg/kg	NA		NA	444	149	NA						NA		NA	NA	
Lead	HQ=1	mg/kg		NA		196	128		NA			NA	NA					
Mercury	HQ=1	mg/kg		NA		NA	1.06							NA				
Zinc	HQ=1	mg/kg	NA	NA	NA		459											
Aldrin	HQ=1	ug/kg					40											
Chlordanes	HQ=1	ug/kg		NA			17.6											
Total DDE	HQ=1	ug/kg				359*	31											
DDx	HQ=1	ug/kg	578	2450	NA	1400	63	760			NA	NA						
Dieldrin	HQ=1	ug/kg					62											
Dioxins/Furans (2,3,7,8-TCDD Eq)	HQ=1	ug/kg																
1,2,3,4,7,8-HxCDF	HQ=1	ug/kg																
1,2,3,7,8-PeCDD	HQ=1	ug/kg																
2,3,4,7,8-PeCDF	HQ=1	ug/kg																
2,3,7,8-TCDD	HQ=1	ug/kg																
2,3,7,8-TCDF	HQ=1	ug/kg																
Bis-2-Ethylhexylphthalate	HQ=1	ug/kg	NA		NA			400		NA		135						
gamma-Hexachlorocyclohexane	HQ=1	ug/kg		NA			4.99											
PCBs	HQ=1	ug/kg	2420	1370	1470	2670	676	272		152	85.5	64						
Total PAHs	HQ=1	mg/kg		NA			22.8										NA	
Total LPAHs	HQ=1	mg/kg					1.5											
Total HPAHs	HQ=1	mg/kg - %fines				150	NA											
TPH (C10 to C12 aromatic)	HQ=1	mg/kg	3.9	3.9	3.9	3.9												
TPH (C10 to C12 aliphatic)	HQ=1	mg/kg	11	11	11	11												
Tributyltin	HQ=1	mg/kg	NA	NA	24	3.08	NA						NA					
Benthic Toxicity		Maximum allowable survival or biomass reduction	Test endpoint specific - See Footnote A, Benthic Toxicity Narrative Requirement															

* = PRG calculated from a µg/kg organic carbon (OC) sediment value normalized to a bulk sediment PRG with units of µg/kg dw using the sitewide mean sediment organic carbon content of 1.71%

Footnote A: Benthic Toxicity Narrative Requirement:

- Chironomus dilutus* 10-day survival: survival > 84%
- Chironomus dilutus* 10-day biomass: biomass > 82% of the laboratory negative control biomass
- Hyalella azteca* 28-day survival: survival > 79%
- Hyalella azteca* 28-day biomass: biomass > 66% of the laboratory negative control biomass

In addition to having survival or biomass values lower than the above PRG percentages, each individual sample with survival or biomass lower than its respective PRGs must have survival or biomass statistically significantly lower than that of the laboratory negative control sediment response, as determined using either a one-tailed parametric t-test, or a one-tailed non-parametric Mann-Whitney U test (sometimes referred to as the Wilcoxon rank sum test or WRS test, either name is fine), with a statistical significance level of p < 0.05. Survival/biomass and statistical significance tests must both fail before an individual sample is considered to have exceeded a toxicity based PRG.

